

Name of Practice: Voluntary Precision Nutrient Management on Cropland
DCR Specification for VNM -5

A. Description and Purpose

This practice will document the use of precision nutrient management practice components that support a higher intensity of nutrient management in the field than existing standard nutrient management practices. This practice is limited to row crop production systems.

This practice supports multiple enhanced nutrient management components such as; zone soil fertility samples, soil (pre-sidedress) nitrate tests (PSNT), corn stalk nitrate sampling (CSNT), and variable rate nitrogen and phosphorous, applications based upon the soil test results of zone (subfield) sampling. It also supports all variable rate nitrogen and phosphorous application technologies. This practice may be used on fields that apply nutrients based upon the soil test results whether they have organic nutrient applications or not, with the exception of Biosolids Applications.

Multiple split applications of nitrogen only applies to corn and cotton crops. This practice does not apply to the late winter split application of nitrogen on small grains. The variable rates of nitrogen and phosphorus listed below (in B. 2.) apply to all row crops. Other macro-micro nutrients may be applied concurrently.

B. Policies and Specifications

1. This is an annual practice. Results from any test supported by the implementation of this practice shall be used to determine the nutrient application rates for the current or following crop as appropriate.
2. At least two of the following identified components must be implemented. Furthermore at least one of those components implemented must be variable rate nitrogen or phosphorous application, or multiple split applications of nitrogen on corn and cotton only.
 - i. zone soil fertility samples,
 - ii. soil (pre-sidedress) nitrate test (PSNT)
 - iii. corn stalk nitrate sampling (CSNT),
 - iv. variable rate nitrogen and/or phosphorous applications based upon the soil test results of (subfield) sampling; other macro-micro nutrients may be applied concurrently
 - v. variable rate of nitrogen application on any row crops
 - vi. multiple (more than one) split applications of nitrogen on corn and cotton only

3. On fields that have organic sources of nitrogen applied during the crop year or in previous years, or if high residual nitrogen levels are suspected from a previous crop, fall nitrogen rates should be determined by a nitrate test.
4. Total nitrogen application rates (including pre-plant and sidedress) on corn should not exceed 1 lb./bu. expected crop yield.
5. Producers should be fully implementing their current nutrient management plan prepared and signed by a certified nutrient management planner. Where this practice is recommended or applied there must be a note to that effect in the narrative or elsewhere in the nutrient management plan indicating that the soils and/or tissue samples were sampled in an appropriate manner. A copy of the current nutrient application, record keeping and work orders shall be maintained by the producer for the purposes of verification.
6. The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones (zone are no larger than 20 acres and based upon soil type), or grids (grid size may be of 1 to 4 acres in size), or had mid-season testing such as soil (Pre-sidedress) Nitrate Testing (PSNT), Corn Stalk Nitrate Testing (CSNT), or received Variable Rate or Zone applications of nitrogen, and/or phosphorus, based upon the zone or grid soil sampling.
7. The producer should provide written verification (such as results of laboratory test, a work order or bill; or as-applied application map of field) to the district (SWCD) within forty-five days of the variable rate nitrogen and/or phosphorous application to verify that the recommendations of the soil samples were followed.
8. Participants may not receive cost-share payments for NM-3C or NM-4 and NM-5 simultaneously on the same crop and field.

C. Technical Responsibility

Technical and administrative responsibility is assigned to qualified technical DCR and SWCD staff in consultation, where appropriate and based on the controlling standard, with DCR, Virginia Certified Nutrient Management Planner(s), NRCS, DOF, and VCE . Individuals certifying technical need and technical practice installation shall have appropriate certifications as identified above, and/or Engineering Job Approval Authority (EJAA), for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.